

## CLAIMS

[1] A method of diagnosing a system, comprising the steps of:  
performing in a batch two or more kinds of diagnoses selected from  
5 the group consisting of a trap operation diagnosis for diagnosing  
operational conditions of a plurality of evaluation target steam traps in a  
client's evaluation target system, a fluid leakage diagnosis for diagnosing  
leakage of fluid from respective portions of an evaluation target piping in  
the evaluation target system, a system improvement diagnosis for  
10 diagnosing need or no need of system improvement in the construction of  
the evaluation target system, and a maintenance improvement diagnosis  
for diagnosing need or no need of improvement in a maintenance system  
currently adopted by the evaluation target system;

reporting in a batch to the client the results of the plurality of  
15 kinds of diagnoses performed;

wherein in reporting the result of the trap operation diagnosis, the  
method reports an economic advantage obtained through reduction in  
trap-passed steam loss by replacing or repairing all the evaluation target  
steam traps, the trap-passed steam loss being calculated based on the  
20 result of the trap operation diagnosis;

in reporting the result of the fluid leakage diagnosis, the method  
reports an economic advantage obtained through reduction in fluid leakage  
loss by repairing leaking portions in the entire evaluation target piping, the  
fluid leakage loss being calculated based on the result of the fluid leakage  
25 diagnosis;

in reporting the result of the system improvement diagnosis, the  
method reports an economic advantage obtained through improvement in a  
system construction found needing improvement by the system  
improvement diagnosis; and

30 in reporting the result of the maintenance improvement diagnosis,

the method reports an economic advantage obtained through improvement in the maintenance system found needing improvement by the maintenance system diagnosis.

5           [2] The system diagnosing method according to claim 1, wherein the batch performing of two or more kinds of diagnoses is completed within one diagnosing day and within this diagnosing day, the batch reporting of the diagnoses performed is carried out.

10           [3] The system diagnosing method according to claim 1, wherein in the trap operation diagnosis, operational conditions of a plurality of steam traps selected from the evaluation target steam traps are diagnosed; and

15           in the calculation of the trap-passed steam loss for all of the evaluation target steam traps based on the result of the trap operation diagnosis, this calculation is effected deductively, based on the result of the diagnosis for said plurality of steam traps and information relating to a ratio between the number of said plurality of steam traps and the total number of the evaluation target steam traps.

20           [4] The system diagnosing method according to any one of claims 1-3, wherein in the fluid leakage diagnosis, fluid leakage from respective portions of a part of the evaluation target piping are diagnosed; and

25           in the calculation of the fluid leakage for the entire evaluation target piping, this calculation is effected deductively, based on the result of the diagnosis for said part of the evaluation target piping and evaluation amount ratio information between said part of the evaluation target piping and entire evaluation target piping.

30           [5] A method of operating an aggregating system for system

diagnosis having an inputting means, a calculating means and a data generating means, the method comprising the steps of:

receiving, by said inputting means, inputs of result of a trap operation diagnosis performed by a trap diagnotor for diagnosing operational conditions of a plurality of evaluation target steam traps in a client's evaluation target system and result of a fluid leakage diagnosis performed by a leakage diagnotor for diagnosing leakage of fluid from respective portions of an evaluation target piping in the evaluation target system;

calculating, by said calculating means, a trap-passed steam loss amount obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and a fluid leakage loss amount obtained by aggregating fluid leakage loss amounts from the respective portions of the entire piping for each type of fluid; and

generating, by said data generating means and based on the calculation results of said calculating means, comprehensive evaluation data having contents indicative of at least a total trap-passed steam loss amount and a total fluid leakage loss amount for each fluid type.

[6] A method of operating an aggregating system for system diagnosis having an inputting means, a calculating means and a data generating means, the method comprising the steps of:

receiving, by said inputting means, inputs of result of a trap operation diagnosis performed by a trap diagnotor for diagnosing operational conditions of a plurality of evaluation target steam traps in a client's evaluation target system and result of a fluid leakage diagnosis performed by a leakage diagnotor for diagnosing leakage of fluid from respective portions of an evaluation target piping in the evaluation target system;

calculating, by said calculating means, a total trap-passed steam

loss amount obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and a total fluid leakage loss amount obtained by aggregating fluid leakage loss amounts from the respective portions of the piping for each type of fluid;

5           calculating also, by said calculating means, a sum total steam loss amount obtained by adding together a total fluid leakage loss amount for steam included in the total fluid leakage loss amount for each fluid type and the trap-passed steam loss amount; and

          generating, by said data generating means and based on the  
10       calculation results of said calculating means, comprehensive evaluation data having contents indicative of at least the total fluid leakage loss amount for each fluid type from which said total fluid leakage loss amount for steam has been subtracted and said sum total steam loss amount.

15           [7] A method of operating an aggregating system for system diagnosis having an inputting means, a calculating means and a data generating means, the method comprising the steps of:

          receiving, by said inputting means, inputs of result of a trap  
          operation diagnosis performed by a trap diagnotor for diagnosing  
20       operational conditions of a plurality of evaluation target steam traps in a client's evaluation target system and result of a fluid leakage diagnosis performed by a leakage diagnotor for diagnosing leakage of fluid from respective portions of an evaluation target piping in the evaluation target system;

25           receiving inputs of a total receiving steam amount and a total necessary steam amount of the target system or a total unknown steam amount which is a difference between the total receiving steam amount and the total necessary steam amount;

          calculating, by said calculating means, a total trap-passed steam  
30       loss amount obtained by aggregating trap-passed steam loss amounts for all

the evaluation target steam traps and a total fluid leakage loss amount obtained by aggregating fluid leakage loss amounts from the respective portions of the piping for each type of fluid;

5       calculating a sum total steam loss amount obtained by adding  
together a total fluid leakage loss amount for steam included in the total  
fluid leakage loss amount for each fluid type and the trap-passed steam loss  
amount and calculating, based on the total receiving steam amount and the  
total necessary steam amount or the total unknown steam amount, a ratio  
10       of the sum total steam loss amount relative to the total unknown steam  
amount which is a difference between said total receiving steam amount  
and said total necessary steam amount, as an improvable unknown steam  
ratio; and

      generating, by said data generating means and based on the  
calculation results of said calculating means, comprehensive evaluation  
15       data having contents indicative of at least the total fluid leakage loss  
amount for each fluid type from which said total fluid leakage loss amount  
for steam has been subtracted and said improvable unknown steam ratio.

[8] A method of operating an aggregating system for system  
20       diagnosis having an inputting means, a calculating means and a data  
generating means, the method comprising the steps of:

      receiving, by said inputting means, inputs result of a trap  
operation diagnosis performed by a trap diagnotor for diagnosing  
operational conditions of some steam traps selected from a plurality of  
25       evaluation target steam traps in a client's evaluation target system, result  
of a fluid leakage diagnosis performed by a leakage diagnotor for diagnosing  
leakage of fluid from respective portions of an evaluation target piping in  
the evaluation target system and information relating to a ratio between  
the number of said plurality of stream traps selected and the total number  
30       of the evaluation target steam traps;

calculating, by said calculating means and based on the result of the trap operation diagnosis and the number ratio information inputted to the inputting means, a deduced value of a total trap-passed steam loss amount obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and a total fluid leakage loss amount obtained by aggregating fluid leakage loss amounts from the respective portions of the piping for each type of fluid;

generating, by said data generating means and based on the calculation results of said calculating means, comprehensive evaluation data having contents indicative of at least the deduced value of the total trap-passed steam loss amount and the total fluid leakage loss amount for each fluid type.

[9] A method of operating an aggregating system for system diagnosis having an inputting means, a calculating means and a data generating means, the method comprising the steps of:

receiving, by said inputting means, inputs result of a trap operation diagnosis performed by a trap diagnotor for diagnosing operational conditions of some steam traps selected from a plurality of evaluation target steam traps in a client's evaluation target system, result of a fluid leakage diagnosis performed by a leakage diagnotor for diagnosing leakage of fluid from respective portions of an evaluation target piping in the evaluation target system and information relating to a ratio between the number of said plurality of stream traps selected and the total number of the evaluation target steam traps;

calculating, by said calculating means and based on the result of the trap operation diagnosis and the number ratio information inputted to the inputting means, a deduced value of a total trap-passed steam loss amount obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and a total fluid leakage loss amount

obtained by aggregating fluid leakage loss amounts from the respective portions of the piping for each type of fluid;

calculating also, by said calculating means, a sum total steam loss amount obtained by adding together a total fluid leakage loss amount for steam included in the total fluid leakage loss amount for each fluid type and the deduced value of the trap-passed steam loss amount; and

generating, by said data generating means and based on the calculation results of said calculating means, comprehensive evaluation data having contents indicative of at least the total fluid leakage loss amount for each fluid type from which said total fluid leakage loss amount for steam has been subtracted and said sum total steam loss amount.

[10] A method of operating an aggregating system for system diagnosis having an inputting means, a calculating means and a data generating means, the method comprising the steps of:

receiving, by said inputting means, inputs result of a trap operation diagnosis performed by a trap diagnotor for diagnosing operational conditions of some steam traps selected from a plurality of evaluation target steam traps in a client's evaluation target system, result of a fluid leakage diagnosis performed by a leakage diagnotor for diagnosing leakage of fluid from respective portions of an evaluation target piping in the evaluation target system and information relating to a ratio between the number of said plurality of stream traps selected and the total number of the evaluation target steam traps;

receiving inputs of a total receiving steam amount and a total necessary steam amount of the target system or a total unknown steam amount which is a difference between the total receiving steam amount and the total necessary steam amount;

calculating, by said calculating means and based on the result of the trap operation diagnosis and the number ratio information inputted to

the inputting means, a deduced value of a total trap-passed steam loss amount obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and a total fluid leakage loss amount obtained by aggregating fluid leakage loss amounts from the respective portions of the piping for each type of fluid;

calculating a sum total steam leakage amount obtained by adding together a total fluid leakage loss amount for steam included in the total fluid leakage loss amount for each fluid type and the deduced value of the trap-passed steam loss amount and calculating, based on the total receiving steam amount and the total necessary steam amount or the total unknown steam amount, a ratio of the sum total steam loss amount relative to the total unknown steam amount which is a difference between said total receiving steam amount and said total necessary steam amount, as an improvable unknown steam ratio; and

generating, by said data generating means and based on the calculation results of said calculating means, comprehensive evaluation data having contents indicative of at least the total fluid leakage loss amount for each fluid type from which said total fluid leakage loss amount for steam has been subtracted and said improvable unknown steam ratio.

[11] A method of operating an aggregating system for system diagnosis having an inputting means, a calculating means and a data generating means, the method comprising the steps of:

receiving, by said inputting means, inputs result of a trap operation diagnosis performed by a trap diagnotor for diagnosing operational conditions of a plurality of evaluation target steam traps in a client's evaluation target system, result of a fluid leakage diagnosis performed by a leakage diagnotor for diagnosing leakage of fluid from respective portions of a part of an evaluation target piping in the evaluation target system and evaluation amount ratio information between said part



of the evaluation target piping and entire evaluation target piping;

calculating, by said calculating means and based on the result of the trap operation diagnosis inputted to the inputting means, a total trap-passed steam loss amount obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and calculating, based on the result of the fluid leakage diagnosis and the evaluation amount ratio information inputted to the inputting means, a deduced value of a total fluid leakage loss amount obtained by aggregating fluid leakage loss amounts from the respective portions of the piping for each type of fluid; and

generating, by said data generating means and based on the calculation results of said calculating means, comprehensive evaluation data having contents indicative of at least the total trap-passed steam loss amount and the deduced value of the total fluid leakage loss amount for each fluid type.

[12] A method of operating an aggregating system for system diagnosis having an inputting means, a calculating means and a data generating means, the method comprising the steps of:

receiving, by said inputting means, inputs result of a trap operation diagnosis performed by a trap diagnotor for diagnosing operational conditions of a plurality of evaluation target steam traps in a client's evaluation target system, result of a fluid leakage diagnosis performed by a leakage diagnotor for diagnosing leakage of fluid from respective portions of a part of an evaluation target piping in the evaluation target system and evaluation amount ratio information between said part of the evaluation target piping and entire evaluation target piping;

calculating, by said calculating means and based on the result of the trap operation diagnosis inputted to the inputting means, a total trap-passed steam loss amount obtained by aggregating trap-passed steam

loss amounts for all the evaluation target steam traps and calculating, based on the result of the fluid leakage diagnosis and the evaluation amount ratio information inputted to the inputting means, a deduced value of a total fluid leakage loss amount obtained by aggregating fluid leakage  
5 loss amounts from the respective portions of the piping for each type of fluid;

calculating also, by said calculating means, a sum total steam leakage amount obtained by adding together a deduced value of a total fluid leakage loss amount for steam included in the deduced value of the total  
10 fluid leakage loss amount for each fluid type and the trap-passed steam loss amount; and

generating, by said data generating means and based on the calculation results of said calculating means, comprehensive evaluation data having contents indicative of at least the deduced value of the total  
15 fluid leakage loss amount for each fluid type from which said deduced value of total fluid leakage loss amount for steam has been subtracted and said sum total steam leakage amount.

[13] A method of operating an aggregating system for system  
20 diagnosis having an inputting means, a calculating means and a data generating means, the method comprising the steps of:

receiving, by said inputting means, inputs result of a trap operation diagnosis performed by a trap diagnotor for diagnosing operational conditions of a plurality of evaluation target steam traps in a  
25 client's evaluation target system, result of a fluid leakage diagnosis performed by a leakage diagnotor for diagnosing leakage of fluid from respective portions of a part of an evaluation target piping in the evaluation target system and evaluation amount ratio information between said part of the evaluation target piping and entire evaluation target piping;

30 receiving inputs of a total receiving steam amount and a total

necessary steam amount of the target system or a total unknown steam amount which is a difference between the total receiving steam amount and the total necessary steam amount;

calculating, by said calculating means and based on the result of  
5 the trap operation diagnosis inputted to the inputting means, a total trap-passed steam loss amount obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and calculating, based on the result of the fluid leakage diagnosis and the evaluation amount ratio information inputted to the inputting means, a deduced value  
10 of a total fluid leakage loss amount obtained by aggregating fluid leakage loss amounts from the respective portions of the piping for each type of fluid;

calculating also, by said calculating means, a sum total steam leakage amount obtained by adding together a deduced value of a total fluid  
15 leakage loss amount for steam included in the deduced value of the total fluid leakage loss amount for each fluid type and the trap-passed steam loss amount; and calculating, based on the total receiving steam amount and the total necessary steam amount or the total unknown steam amount inputted to the inputting means, a ratio of the sum total steam loss amount  
20 relative to the total unknown steam amount which is a difference between said total receiving steam amount and said total necessary steam amount, as an improvable unknown steam ratio; and

generating, by said data generating means and based on the calculation results of said calculating means, comprehensive evaluation  
25 data having contents indicative of at least the deduced value of the total fluid leakage loss amount for each fluid type from which the deduced value of said total fluid leakage loss amount for steam has been subtracted and said improvable unknown steam ratio.

30 [14] A method of operating an aggregating system for system

diagnosis having an inputting means, a calculating means and a data generating means, the method comprising the steps of:

receiving, by said inputting means, inputs result of a trap operation diagnosis performed by a trap diagnotor for diagnosing operational conditions of some steam traps selected from a plurality of evaluation target steam traps in a client's evaluation target system, result of a fluid leakage diagnosis performed by a leakage diagnotor for diagnosing leakage of fluid from respective portions of a part of an evaluation target piping in the evaluation target system, information relating to a ratio between the number of said plurality of stream traps selected and the total number of the evaluation target steam traps and evaluation amount ratio information between said part of the evaluation target piping and entire evaluation target piping;

calculating, by said calculating means and based on the result of the trap operation diagnosis and the number ratio information inputted to the inputting means, a deduced value of a total trap-passed steam loss amount obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and calculating, based on the result of the fluid leakage diagnosis and the evaluation amount ratio information inputted to the inputting means, a deduced value of a total fluid leakage loss amount obtained by aggregating fluid leakage loss amounts from the respective portions of the piping for each type of fluid; and

generating, by said data generating means and based on the calculation results of said calculating means, comprehensive evaluation data having contents indicative of at least the deduced value of the total trap-passed steam loss amount and the deduced value of the total fluid leakage loss amount for each type of fluid.

[15] A method of operating an aggregating system for system diagnosis having an inputting means, a calculating means and a data

generating means, the method comprising the steps of:

receiving, by said inputting means, inputs result of a trap operation diagnosis performed by a trap diagnotor for diagnosing operational conditions of some steam traps selected from a plurality of evaluation target steam traps in a client's evaluation target system, result of a fluid leakage diagnosis performed by a leakage diagnotor for diagnosing leakage of fluid from respective portions of a part of an evaluation target piping in the evaluation target system, information relating to a ratio between the number of said plurality of stream traps selected and the total number of the evaluation target steam traps and evaluation amount ratio information between said part of the evaluation target piping and entire evaluation target piping;

calculating, by said calculating means and based on the result of the trap operation diagnosis and the number ratio information inputted to the inputting means, a deduced value of a total trap-passed steam loss amount obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and calculating, based on the result of the fluid leakage diagnosis and the evaluation amount ratio information inputted to the inputting means, a deduced value of a total fluid leakage loss amount obtained by aggregating fluid leakage loss amounts from the respective portions of the piping for each type of fluid;

calculating also, by said calculating means, a sum total steam leakage amount obtained by adding together a deduced value of a total fluid leakage loss amount for steam included in the deduced value of the total fluid leakage loss amount for each fluid type and the deduced value of the trap-passed steam loss amount; and

generating, by said data generating means and based on the calculation results of said calculating means, comprehensive evaluation data having contents indicative of at least the deduced value of the total fluid leakage loss amount for each fluid type from which the deduced value

of said total fluid leakage loss amount for steam has been subtracted and said sum total steam loss amount.

5 [16] A method of operating an aggregating system for system diagnosis having an inputting means, a calculating means and a data generating means, the method comprising the steps of:

receiving, by said inputting means, inputs result of a trap operation diagnosis performed by a trap diagnotor for diagnosing operational conditions of some steam traps selected from a plurality of evaluation target steam traps in a client's evaluation target system, result of a fluid leakage diagnosis performed by a leakage diagnotor for diagnosing leakage of fluid from respective portions of a part of of an evaluation target piping in the evaluation target system, information relating to a ratio between the number of said plurality of stream traps selected and the total number of the evaluation target steam traps and evaluation amount ratio information between said part of the evaluation target piping and entire evaluation target piping;

receiving inputs of a total receiving steam amount and a total necessary steam amount of the target system or a total unknown steam amount which is a difference between the total receiving steam amount and the total necessary steam amount;

calculating, by said calculating means and based on the result of the trap operation diagnosis and the number ratio information inputted to the inputting means, a deduced value of a total trap-passed steam loss amount obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and calculating, based on the result of the fluid leakage diagnosis and the evaluation amount ratio information inputted to the inputting means, a deduced value of a total fluid leakage loss amount obtained by aggregating fluid leakage loss amounts from the respective portions of the piping for each type of fluid;

calculating also, by said calculating means, a sum total steam leakage amount obtained by adding together a deduced value of a total fluid leakage loss amount for steam included in the deduced value of the total fluid leakage loss amount for each fluid type and the deduced value of the trap-passed steam loss amount; and calculating, based on the total receiving steam amount and the total necessary steam amount or the total unknown steam amount, a ratio of the sum total steam loss amount relative to the total unknown steam amount which is a difference between said total receiving steam amount and said total necessary steam amount, as an improvable unknown steam ratio; and

generating, by said data generating means and based on the calculation results of said calculating means, comprehensive evaluation data having contents indicative of at least the deduced value of the total fluid leakage loss amount for each fluid type from which the deduced value of said total fluid leakage loss amount for steam has been subtracted and said improvable unknown steam ratio.

[17] The method of operating an aggregating system for system diagnosis according to any one of claims 5-16, wherein at said receiving step, said inputting means receives, in addition to the inputs relating to the trap operation diagnosis and the fluid leakage diagnosis, a result of a system improvement diagnosis performed on a system construction of the target system or a result of a maintenance method diagnosis performed on a maintenance method currently adopted by the target system; and

at said data generating step, said data generating means generates, as said comprehensive evaluation data, data having, in addition to said contents based on the calculation results of the calculating means, the result of the system improvement diagnosis or the result of the maintenance improvement diagnosis inputted to said inputting means.

[18] An aggregating system for system diagnosis, comprising:

inputting means for receiving from a trap diagnotor an a result of a trap operation diagnosis performed by this trap diagnotor for diagnosing operational conditions of a plurality of evaluation target steam traps in a client's evaluation target system and receiving from a leakage diagnotor result of a fluid leakage diagnosis performed by this leakage diagnotor for diagnosing leakage of fluid from respective portions of an evaluation target piping in the evaluation target system; and

calculating means for calculating, based on the result of the trap operation diagnosis inputted to the inputting means, a total trap-passed steam loss amount obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and calculating, based on the result of the fluid leakage diagnosis inputted to the inputting means, a total fluid leakage loss amount obtained by aggregating fluid leakage loss amounts from the respective portions of the piping for each type of fluid.

[19] An aggregating system for system diagnosis, comprising:

inputting means for receiving from a trap diagnotor a result of a trap operation diagnosis performed by this trap diagnotor for diagnosing operational conditions of a plurality of evaluation target steam traps in a client's evaluation target system and receiving from a leakage diagnotor result of a fluid leakage diagnosis performed by this leakage diagnotor for diagnosing leakage of fluid from respective portions of an evaluation target piping in the evaluation target system; and

calculating means for calculating, based on the result of the trap operation diagnosis inputted to the inputting means, a total trap-passed steam loss amount obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and calculating, based on the result of the fluid leakage diagnosis inputted to the inputting means, a total fluid leakage loss amount obtained by aggregating fluid leakage loss



amounts from the respective portions of the piping for each type of fluid;  
and

5       said calculating means also calculating a sum total steam loss  
amount obtained by adding together a total fluid leakage loss amount for  
steam included in the total fluid leakage loss amount for each fluid type and  
the trap-passed steam loss amount.

[20]   An aggregating system for system diagnosis, comprising:

10       inputting means for receiving from a trap diagnotor a result of a  
trap operation diagnosis performed by this trap diagnotor for diagnosing  
operational conditions of a plurality of evaluation target steam traps in a  
client's evaluation target system and receiving from a leakage diagnotor  
result of a fluid leakage diagnosis performed by this leakage diagnotor for  
diagnosing leakage of fluid from respective portions of an evaluation target  
15       piping in the evaluation target system;

      said inputting means receiving also a total receiving steam amount  
and a total necessary steam amount of the target system or a total  
unknown steam amount which is a difference between the total receiving  
steam amount and the total necessary steam amount;

20       calculating means for calculating, based on the result of the trap  
operation diagnosis inputted to the inputting means, a total trap-passed  
steam loss amount obtained by aggregating trap-passed steam loss  
amounts for all the evaluation target steam traps and calculating, based on  
the result of the fluid leakage diagnosis inputted to the inputting means, a  
25       total fluid leakage loss amount obtained by aggregating fluid leakage loss  
amounts from the respective portions of the piping for each type of fluid;

      said calculating means calculating also a sum total steam loss  
amount obtained by adding together a total fluid leakage loss amount for  
steam included in the total fluid leakage loss amount for each fluid type and  
30       the trap-passed steam loss amount and calculating, based on the total

receiving steam amount and the total necessary steam amount or the total unknown steam amount, a ratio of the sum total steam loss relative to the total unknown steam amount which is a difference between said total receiving steam amount and said total necessary steam amount, as an  
5 improvable unknown steam ratio.

[21] An aggregating system for system diagnosis, comprising:

inputting means for receiving, from a trap diagnotor, result of a trap operation diagnosis performed by this trap diagnotor for diagnosing  
10 operational conditions of some steam traps selected from a plurality of evaluation target steam traps in a client's evaluation target system, and receiving, from a leakage diagnotor, result of a fluid leakage diagnosis performed by this leakage diagnotor for diagnosing leakage of fluid from respective portions of an evaluation target piping in the evaluation target  
15 system and receiving also information relating to a ratio between the number of said plurality of stream traps selected and the total number of the evaluation target steam traps;

calculating means for calculating, based on the result of the trap operation diagnosis and the number ratio information inputted to the  
20 inputting means, a deduced value of a total trap-passed steam loss amount obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and calculating, based on the result of the fluid leakage diagnosis inputted to the inputting means, a total fluid leakage loss amount obtained by aggregating fluid leakage loss amounts  
25 from the respective portions of the piping for each type of fluid.

[22] An aggregating system for system diagnosis, comprising:

inputting means for receiving, from a trap diagnotor, result of a trap operation diagnosis performed by this trap diagnotor for diagnosing  
30 operational conditions of some steam traps selected from a plurality of

evaluation target steam traps in a client's evaluation target system, and receiving, from a leakage diagnotor, result of a fluid leakage diagnosis performed by this leakage diagnotor for diagnosing leakage of fluid from respective portions of an evaluation target piping in the evaluation target system and receiving also information relating to a ratio between the number of said plurality of stream traps selected and the total number of the evaluation target steam traps;

calculating means for calculating, based on the result of the trap operation diagnosis and the number ratio information inputted to the inputting means, a deduced value of a total trap-passed steam loss amount obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and calculating, based on the result of the fluid leakage diagnosis inputted to the inputting means, a total fluid leakage loss amount obtained by aggregating fluid leakage loss amounts from the respective portions of the piping for each type of fluid; and

said calculating means calculating also a sum total steam loss amount obtained by adding together a total fluid leakage loss amount for steam included in the total fluid leakage loss amount for each fluid type and the deduced value of the trap-passed steam loss amount.

[23] An aggregating system for system diagnosis, comprising:

inputting means for receiving, from a trap diagnotor, result of a trap operation diagnosis performed by this trap diagnotor for diagnosing operational conditions of some steam traps selected from a plurality of evaluation target steam traps in a client's evaluation target system, and receiving, from a leakage diagnotor, result of a fluid leakage diagnosis performed by this leakage diagnotor for diagnosing leakage of fluid from respective portions of an evaluation target piping in the evaluation target system and receiving also information relating to a ratio between the number of said plurality of stream traps selected and the total number of

the evaluation target steam traps;

said inputting means receiving also inputs of a total receiving steam amount and a total necessary steam amount of the target system or a total unknown steam amount which is a difference between the total receiving steam amount and the total necessary steam amount;

calculating means for calculating, based on the result of the trap operation diagnosis and the number ratio information inputted to the inputting means, a deduced value of a total trap-passed steam loss amount obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and calculating, based on the result of the fluid leakage diagnosis inputted to the inputting means, a total fluid leakage loss amount obtained by aggregating fluid leakage loss amounts from the respective portions of the piping for each type of fluid; and

said calculating means calculating also a sum total steam loss amount obtained by adding together a total fluid leakage loss amount for steam included in the total fluid leakage loss amount for each fluid type and the deduced value of the trap-passed steam loss amount and calculating, based on the total receiving steam amount and the total necessary steam amount or the total unknown steam amount inputted to the inputting means, a ratio of the sum total steam loss amount relative to the total unknown steam amount which is a difference between said total receiving steam amount and said total necessary steam amount, as an improvable unknown steam ratio.

[24] An aggregating system for system diagnosis, comprising:

inputting means for receiving, from a trap diagnotor and a leakage diagnotor, inputs result of a trap operation diagnosis performed by this trap diagnotor for diagnosing operational conditions of a plurality of evaluation target steam traps in a client's evaluation target system, result of a fluid leakage diagnosis performed by this leakage diagnotor for diagnosing

leakage of fluid from respective portions of a part of an evaluation target piping in the evaluation target system and receiving also evaluation amount ratio information between said part of the evaluation target piping and entire evaluation target piping;

5           calculating means for calculating, based on the result of the trap operation diagnosis inputted to the inputting means, a total trap-passed steam loss amount obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and calculating also, based on the result of the fluid leakage diagnosis and the evaluation  
10       amount ratio information inputted to the inputting means, a deduced value of a total fluid leakage loss amount obtained by aggregating fluid leakage loss amounts from the respective portions of the piping for each type of fluid.

15           [25] An aggregating system for system diagnosis, comprising:  
          inputting means for receiving, from a trap diagnotor and a leakage diagnotor, inputs result of a trap operation diagnosis performed by this trap diagnotor for diagnosing operational conditions of a plurality of evaluation  
20       target steam traps in a client's evaluation target system, result of a fluid leakage diagnosis performed by this leakage diagnotor for diagnosing leakage of fluid from respective portions of a part of an evaluation target piping in the evaluation target system and receiving also evaluation amount ratio information between said part of the evaluation target piping and entire evaluation target piping;

25           calculating means for calculating, based on the result of the trap operation diagnosis inputted to the inputting means, a total trap-passed steam loss amount obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and calculating also, based on the result of the fluid leakage diagnosis and the evaluation  
30       amount ratio information inputted to the inputting means, a deduced value

of a total fluid leakage loss amount obtained by aggregating fluid leakage loss amounts from the respective portions of the piping for each type of fluid; and

5       said calculating means calculating also a sum total steam loss amount obtained by adding together a deduced value of a total fluid leakage loss amount for steam included in the deduced value of the total fluid leakage loss amount for each fluid type and the trap-passed steam loss amount.

10       [26] An aggregating system for system diagnosis, comprising:

inputting means for receiving, from a trap diagnotor and a leakage diagnotor, inputs result of a trap operation diagnosis performed by this trap diagnotor for diagnosing operational conditions of a plurality of evaluation target steam traps in a client's evaluation target system, result of a fluid leakage diagnosis performed by this leakage diagnotor for diagnosing leakage of fluid from respective portions of a part of an evaluation target piping in the evaluation target system and receiving also evaluation amount ratio information between said part of the evaluation target piping and entire evaluation target piping;

20       said inputting means receiving also a total receiving steam amount and a total necessary steam amount of the target system or a total unknown steam amount which is a difference between the total receiving steam amount and the total necessary steam amount;

calculating means for calculating, based on the result of the trap operation diagnosis inputted to the inputting means, a total trap-passed steam loss amount obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and calculating, based on the result of the fluid leakage diagnosis and the evaluation amount ratio information inputted to the inputting means, a deduced value of a total fluid leakage loss amount obtained by aggregating fluid leakage loss

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amounts from the respective portions of the piping for each type of fluid;  
and

5       said calculating means calculating also a sum total steam loss  
amount obtained by adding together a deduced value of a total fluid leakage  
loss amount for steam included in the deduced value of the total fluid  
leakage loss amount for each fluid type and the trap-passed steam loss  
amount and calculating, based on the total receiving steam amount and the  
total necessary steam amount or the total unknown steam amount, a ratio  
occupied of the sum total steam loss amount relative to the total unknown  
10       steam amount which is a difference between said total receiving steam  
amount and said total necessary steam amount, as an improvable unknown  
steam ratio.

[27]   An aggregating system for system diagnosis, comprising:  
15       inputting means for receiving, from a trap diagnotor, result of a  
trap operation diagnosis performed by this trap diagnotor for diagnosing  
operational conditions of some steam traps selected from a plurality of  
evaluation target steam traps in a client's evaluation target system, and  
receiving, from a leakage diagnotor, result of a fluid leakage diagnosis  
20       performed by this leakage diagnotor for diagnosing leakage of fluid from  
respective portions of a part of an evaluation target piping in the evaluation  
target system and receiving also information relating to a ratio between the  
number of said plurality of stream traps selected and the total number of  
the evaluation target steam traps and evaluation amount ratio information  
25       between said part of the evaluation target piping and entire evaluation  
target piping; and

      calculating means for calculating, based on the result of the trap  
operation diagnosis and the number ratio information inputted to the  
inputting means, a deduced value of a total trap-passed steam loss amount  
30       obtained by aggregating trap-passed steam loss amounts for all the

evaluation target steam traps and calculating, based on the result of the fluid leakage diagnosis and the evaluation amount ratio information inputted to the inputting means, a deduced value of a total fluid leakage loss amount obtained by aggregating fluid leakage loss amounts from the respective portions of the piping for each type of fluid.

[28] An aggregating system for system diagnosis, comprising:

inputting means for receiving, from a trap diagnotor, result of a trap operation diagnosis performed by this trap diagnotor for diagnosing operational conditions of some steam traps selected from a plurality of evaluation target steam traps in a client's evaluation target system, and receiving, from a leakage diagnotor, result of a fluid leakage diagnosis performed by this leakage diagnotor for diagnosing leakage of fluid from respective portions of a part of an evaluation target piping in the evaluation target system and receiving also information relating to a ratio between the number of said plurality of stream traps selected and the total number of the evaluation target steam traps and evaluation amount ratio information between said part of the evaluation target piping and entire evaluation target piping;

calculating means for calculating, based on the result of the trap operation diagnosis and the number ratio information inputted to the inputting means, a deduced value of a total trap-passed steam loss amount obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and calculating, based on the result of the fluid leakage diagnosis and the evaluation amount ratio information inputted to the inputting means, a deduced value of a total fluid leakage loss amount obtained by aggregating fluid leakage loss amounts from the respective portions of the piping for each type of fluid; and

said calculating means calculating also a sum total steam loss amount obtained by adding together a deduced value of a total fluid leakage



loss amount for steam included in the deduced value of the total fluid leakage loss amount for each type of fluid and the deduced value of the total trap-passed steam loss amount.

5                   [29] An aggregating system for system diagnosis, comprising:

                  inputting means for receiving, from a trap diagnotor, result of a trap operation diagnosis performed by this trap diagnotor for diagnosing operational conditions of some steam traps selected from a plurality of evaluation target steam traps in a client's evaluation target system, and  
10                   receiving, from a leakage diagnotor, result of a fluid leakage diagnosis performed by this leakage diagnotor for diagnosing leakage of fluid from respective portions of a part of an evaluation target piping in the evaluation target system and receiving also information relating to a ratio between the number of said plurality of stream traps selected and the total number of  
15                   the evaluation target steam traps and evaluation amount ratio information between said part of the evaluation target piping and entire evaluation target piping;

                  said inputting means receiving also a total receiving steam amount and a total necessary steam amount of the target system or a total  
20                   unknown steam amount which is a difference between the total receiving steam amount and the total necessary steam amount;

                  calculating means for calculating, based on the result of the trap operation diagnosis and the number ratio information inputted to the inputting means, a deduced value of a total trap-passed steam loss amount  
25                   obtained by aggregating trap-passed steam loss amounts for all the evaluation target steam traps and calculating, based on the result of the fluid leakage diagnosis and the evaluation amount ratio information inputted to the inputting means, a deduced value of a total fluid leakage loss amount obtained by aggregating fluid leakage loss amounts from the  
30                   respective portions of the piping for each type of fluid; and

said calculating means calculating also a sum total steam loss amount obtained by adding together a deduced value of a total fluid leakage loss amount for steam included in the deduced value of the total fluid leakage loss amount for each fluid type and the trap-passed steam loss amount and calculating, based on the total receiving steam amount and the total necessary steam amount or the total unknown steam amount inputted to the inputting means, a ratio of the sum total steam loss amount relative to the total unknown steam amount which is a difference between said total receiving steam amount and said total necessary steam amount, as an improvable unknown steam ratio.